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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/601,109 10/16/00 LEYCURAS

A 15675.P326

EXAMINER

IM52/0625

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ART UNIT PAPER NUMBER1762  
DATE MAILED:

06/25/01

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Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

<b>Office Action Summary</b>	Application No. <b>09/601,109</b>	Applicant(s) <b>Andre Leycuras</b>
	Examiner <b>Bret Chen</b>	Art Unit <b>1762</b>

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1)  Responsive to communication(s) filed on \_\_\_\_\_.
- 2a)  This action is FINAL.      2b)  This action is non-final.
- 3)  Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

#### Disposition of Claims

- 4)  Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5)  Claim(s) \_\_\_\_\_ is/are allowed.
- 6)  Claim(s) 1-4 and 6-8 is/are rejected.
- 7)  Claim(s) 5 and 9-21 is/are objected to.
- 8)  Claims \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9)  The specification is objected to by the Examiner.
- 10)  The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.
- 11)  The proposed drawing correction filed on \_\_\_\_\_ is: a)  approved b)  disapproved.
- 12)  The oath or declaration is objected to by the Examiner.

#### Priority under 35 U.S.C. § 119

- 13)  Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

a)  All b)  Some\* c)  None of:

1.  Certified copies of the priority documents have been received.
2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3.  Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\*See the attached detailed Office action for a list of the certified copies not received.

- 14)  Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

#### Attachment(s)

15) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	18) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____
16) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	19) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
17) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____	20) <input type="checkbox"/> Other: _____

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## **DETAILED ACTION**

Claims 1-21 are pending in this application.

### *Specification*

1. This application does not contain an abstract of the disclosure as required by 37 CFR 1.72(b). An abstract on a separate sheet is required.
2. The disclosure is objected to because of the following informalities listed below.

Appropriate correction is required.

On p.1 line 16, delete ")" as there is no corresponding open parenthetical element.

### *Claim Objections*

3. Claim 5 is objected to under 37 CFR 1.75© as being in improper form because multiple dependent claim 5 depends on another multiple dependent claim 3. See MPEP § 608.01(n). The same issue applies to claim 9-21. Accordingly, claims 5 and 9-21 have not been further treated on the merits.

### *Claim Rejections - 35 USC § 112*

4. Claims 1-21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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In claim 1 line 1, the term “the vapor deposition” lacks antecedent basis. The same issue applies to claim 6.

In claim 1 lines 1-2, it is noted that the claimed invention is directed to a process for the vapor deposition of layers. However, there is not recitation of a deposition step in the instant claims. The examiner suggests incorporating a vapor deposition step.

In claim 1 lines 5-6, it is not clear how the gaseous compound “sweep” a duct. Clarification and appropriate amendments are requested. The same issue applies to claim 6.

In claim 1 line 6, the term “the gaseous compounds” lacks antecedent basis. The same issue applies to claim 6.

In claim 2, the applicant requires a heat shield around the first heating means. This is confusing as the examiner is unable to find this limitation in the drawings. Clarification and appropriate amendments are requested.

In claim 8 line 1, the wording is confusing and appears to be an unacceptable multiple dependent claim. The word should be --or-- not “and”. Appropriate amendments are requested.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

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having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claims 1-4 and 6-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tanaka (5,020,474) or Ohkase (5,443,648).** Tanaka discloses a vapor phase epitaxial growth reactor in which there a reactor tube 1 is located between a substrate 4 and heating elements 5 (col.4 lines 4-24). The heating coil 5 is located on either side of the substrate plane as indicated in Figure 1. In addition, the reactor tube can be made of quartz (col.4 line 25). It is the examiner's position that quartz meets the claimed limitation of a refractory.

Ohkase discloses an vertical heat treatment in which a substrate W is placed within a process tube 11 (col.3 lines 50-68). Heater units 21 and 23 are located above and below the substrate plane, respectively as well as outside the process tube (see Figure 1). The process tube can be made of quartz (col.3 lines 63-64). However, the references fail to specifically teach layers.

It is noted that both references fairly teach of depositing materials. One skilled in the art knows that some applications require the use of more than one layers. Given the successful teaching of coating one layer, the skilled artisan would reasonably expect the successful deposition of more than one layer. Hence, it would have been obvious to one skilled in the art to utilize more than one layer with an expectation of success.

The limitations of claims 2-4 and 7-8 have been addressed above.

Stall et al. (5,336,324) has been provided for additional information.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bret Chen whose telephone number is (703) 308-3809. The examiner can normally be reached on Monday through Thursday from 6:30 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shrive Beck, can be reached on (703) 308-2333. The fax phone number for this Group is (703) 305-5408. Amendment After Finals should be faxed to (703) 305-3599.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0661.



bc

June 21, 2001